

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

McMAHON HELICOPTER SERVICES, INC.,

Plaintiff,

v.

Case No. 04-74133
Judge Avern Cohn

UNITED STATES OF AMERICA,

Defendant.

_____ /

DECISION

I. Introduction

This is an aircraft accident case. Plaintiff McMahon Helicopter Services, Inc. (McMahon) is suing defendant, the United States of America, because of the alleged negligence of the aircraft controllers at the Willow Run Michigan Airport (Airport) on the evening of December 22, 2003, when a helicopter owned by McMahon struck a light pole at the Airport in the course of landing. The helicopter was a total loss. The background of the case is reflected in the Memorandum and Order Granting in Part and Denying in Part Defendants' Motion for Summary Judgment filed on July 27, 2006.

The case was tried to the Court over six (6) days in the spring of 2007. Post-trial, the parties filed voluminous proposed findings of fact with McMahon endeavoring to convince the Court that the accident was caused by the negligence of the controllers in failing to warn the pilot of the existence of the poles, and the United States endeavoring to convince the Court that the accident was caused by pilot error.

The United States is correct. The sole cause of the accident was pilot error; in attempting to land the helicopter the pilot was off- course. As will be explained, the pilot mistook the south ramp at Willow Run for the west ramp.

II. The Trial

A.

Testifying at trial for McMahon were:

- Randall Reeves, the pilot;
- Brian McMahon, owner of McMahon;
- William Ciesla, local aircraft controller on the evening of the accident;
- Larry Van Valkenburg, ground aircraft controller on the evening of the accident;
- R.P. "Pete" Burgess, an expert in the operation of helicopters; and
- Nathaniel E. McMahon, a passenger in the helicopter.

Testifying at trial for the United States were:

- Robert A. Feerst, an expert in piloting helicopters;
- Ken Orloff, an expert in flight path reconstruction;
- Donald F. Hensley, an expert in control tower operations;
- Raymond A. Syms, an expert in aircraft accident reconstruction;
- Timothy Underhill, a United States Customs officer on duty the evening of the accident;
- Laurence O'Sullivan, a Willow Run police officer on duty the evening of the accident; and
- Kevin Goode, a helicopter pilot and insurance adjuster.

Numerous exhibits were entered into evidence. They included photographs, diagrams, radar tracks, manuals, handbooks, log books, accident reports, transcripts of controller-pilot conversations, statements, regulations, maps, and animations.

Of particular importance to an understanding of the events in question, and attached as exhibits, are:

- A. (DX 4) a satellite photograph of Willow Run;
- B. (DX 15) the radar track of the helicopter overlay and the track Reeves said he was flying.
- C. (DX 16) a close-in satellite photograph of Willow Run together with the helicopter approach profile.
- D. (DX 19A) a close-in satellite photograph of Willow Run with salient structures marked;
- E. (DX 20A) a satellite photograph of the south ramp with the poles and the site of crash marked;
- F. (DX 30) a layout of Willow Run with salient features marked;
- G. (DX 155C) the track of the helicopter operator displaying the westerly direction it took and the turn to the southwest.
- H. (DX 157) a satellite photograph of Willow Run and its approach area with the flight path, time, altitude points where the helicopter was observed by an air traffic controller and conversations marked;

Additionally, the animations of the helicopter in flight and of the track of the helicopter are important to an understanding of the events in question. These are DX 23 and DX 89. As one reads this decision the exhibits should be consulted for a full understanding of what occurred.

III. Findings of Fact

The following are the factual findings required by Fed.R.Civ.P. 52. The findings are based on an assessment of the credibility of the witnesses, weighing the testimony and exhibits, and drawing such inferences from this evidence as is appropriate, with due consideration of the proposed findings of fact proffered by the parties. In the assessment of the credibility of the expert testimony, substantially more weight has been given to the opinions of the experts called by the United States, and in particular the animated reconstruction of the events in question as displayed in DX 23 and DX 89. Reeves' account of his flight path was not credible.¹

1. McMahon is a Michigan corporation with its primary place of business in Canton, Michigan.
2. Brian McMahon is president and owner of McMahon.
3. Willow Run is located in Ypsilanti, Michigan. Willow Run has three ramp areas. The east ramp is the most frequently used. Helicopters repeatedly take off from and land at this ramp. The west ramp has a customs circle. Aircraft entering the United States from Canada must go to this ramp as soon as they land to obtain customs clearance. The south ramp has almost no helicopter traffic.
4. The accident helicopter was a Sikorsky S-58T.
5. The air traffic controllers on duty on December 22, 2003 were employees of the United States. The controllers direct aircraft operations in the air and on the surface of an airport, exclusive of ramps and parking areas.

¹ This account of the facts is considerably less detailed than that proffered by the parties. Given that pilot error was clearly the cause of the accident and that the sequence of events is crystal clear, a more detailed discussion of the facts is not necessary.

6. William Ciesla was the local controller on December 22, 2003. The local controller is responsible for separating and sequencing aircrafts in the Willow Run airspace and on the runways.

7. Larry Van Valkenburg was the ground controller on December 22, 2003. The ground controller controls aircraft while on the taxiways and until they reach or after they leave a ramp area.

8. Runways and taxiways are movement areas. Traffic on them is directed by the air traffic controllers located in the tower. Permission is needed to either enter or leave a runway or taxiway.

9. Ramps are non-movement areas. Movement on ramps is not under the control of the tower.

10. On December 22, 2003 the helicopter initially took off from Canton, Michigan, flew to Ohio, then to Willow Run. It then took off from the customs circle at the west ramp, and flew to Windsor, Ontario. On return the helicopter intended to land initially at Willow Run and obtain customs clearance.

11. Randall Reeves was the pilot of the helicopter. Nathaniel McMahon was a passenger in the helicopter.

12. The helicopter left Windsor, Ontario at approximately 5:45 p.m. headed for Willow Run. Visibility was good. Reeves was operating under visual flight rules (VFR).

13. The control tower at Willow Run was equipped with a D-BRITE screen which allowed it to verify the helicopter's position by radar hits until it was about within one (1) mile of Willow Run.

14. At 5:59 p.m. Reeves reported to Detroit Approach Central at the Detroit

Metropolitan Airport that he was flying through its airspace and that he had Willow Run in sight. At 6:00 p.m. Detroit Approach Central advised Reeves to contact air traffic control at Willow Run.

15. At 6:00:30 p.m. Reeves contacted the local controller, Ciesla, at Willow Run and told him he was 6.7 miles to the east, and that his altitude was around 3,000 feet.

16. At 6:00:48 p.m. Ciesla advised Reeves that he could proceed directly to the customs ramp. This meant Reeves could proceed in a straight line. As previously stated, Reeves, coming from Canada, was obligated to go directly to the customs ramp to obtain permission to enter the United States. Ciesla telling Reeves that he could proceed direct meant that there were no aircraft in the airspace between the helicopter and the customs ramp. Since a helicopter does not require a runway to land, Reeves could fly directly to the customs ramp rather than touching down on a runway and then taking a taxiway to the customs ramp.

17. Alternatively, Reeves could have landed on a runway and then taxied to the customs ramp.

18. At 6:04:47 p.m. Ciesla told Reeves that his flight plan was closed out. All flights entering or leaving the United States must have a flight plan on file. This means that Reeves filed a flight plan before leaving the United States. The flight plan was on file at the Lansing Flight Service Station of the Federal Aviation Administration. Ciesla, as a matter of courtesy, called Lansing to advise that Reeves was now in the United States and in the process of landing.

19. Adjacent to the south ramp were six (6) light poles. They were erected in the late 1980s to provide light for operations on the south ramp. Some years before the

accident they became inoperative. The poles ranged in height from 35 feet to 65 feet. When the lights on the top of the poles were functioning they were shrouded so that their illumination could not be mistaken by pilots as runway or taxiway lights. The poles were not shown on any official map of Willow Run. The air traffic controllers, including Ciesla and Van Valkenburg had no knowledge of the poles.

20. The poles were not required to be marked on any map of Willow Run. They were considered to be obstacles. An obstacle is a structure that protrudes above the surface of an airport. An obstacle can be stationary or moveable. A movable obstacle for example is an automobile parked on a ramp. An obstacle is to be contrasted with an obstruction which is required to be marked. An obstruction is defined as an obstacle that exceeds the criteria established by 14 Code of Federal Regulations Part 77.

21. Instead of going directly to the west ramp as advised by Ciesla, Reeves headed for the south ramp in the mistaken belief that it was the west ramp, on which the customs circle is located.

22. At 6:05:38 p.m. the helicopter, in approaching the south ramp, clipped one of the light poles. The pole clipped was 65 feet in height. The helicopter came to the ground on the south ramp. It was completely demolished. Reeves and Nathaniel McMahon were not injured in the crash.

23. The light pole which the helicopter struck was approximately 102 feet east of the south ramp and 4,170 feet away from the nearest edge of the customs circle. It was also 3,400 feet away from the nearest edge of the west ramp.

24. Even before Reeves contacted the control tower at Willow Run, Ciesla was aware of its location. He had seen the helicopter on the D-BRITE scope. The helicopter

was to the east-northeast of Willow Run at the time.

25. The instruction to proceed direct gave Reeves permission to enter Willow Run's airspace and fly over or across all of its runways and taxiways and land on the west ramp. No further directions were required to be given Reeves.

26. The standard of care for air traffic controllers did not require cautionary instructions to Reeves about poles, parked aircraft, parked cars or other obstacles under or near the helicopter's flight path.

27. After Reeves was told to proceed directly to the customs circle the radar data establishes that he continued to proceed in a west-southwest heading towards Willow Run.

28. Reeves' heading at the last radar hit appeared that he was making an approach to intercept the imaginary center line of runway 27L and then fly generally over the runway. This type of approach at night is consistent with an air traffic controller's expectations and the practices of a prudent helicopter pilot.

29. That Reeves' flight path was westbound in the vicinity of runway 27L was not a cause for concern. Controllers expect helicopter pilots to fly over runways at night for obstacle avoidance. If the helicopter was flying at a specific heading towards the south ramp instead of a generally westerly heading parallel to runway 27L, Ciesla would not have been able to discern such a slight variation at night from the control tower.

30. Based on the instruction to proceed directly to the west ramp, Ciesla could reasonably expect Reeves to turn right down runway 32 or continue down runway 27L, and then turn right over taxiway A or B, or make a right turn across the infield toward the west ramp.

31. Reeves made a wrong turn toward the wrong ramp. In doing so he deviated

from the instruction to proceed directly to the customs ramp.

32. Reeves tried to land at the south ramp in the mistaken belief it was the west ramp. According to established flight standards for the landing of helicopters, it was flying too low, too early to land at the west ramp. Its wheels were only 44 feet from the ground when its rotor blades struck the pole, nearly 3,400 feet from the nearest edge of the west ramp.

33. Underhill spoke to Reeves moments after the crash. He asked Reeves what he was doing on the south ramp. Reeves replied that he was going to customs. Pointing to the west ramp Underhill showed Reeves where customs was located. Reeves looked toward the west ramp and responded. According to Underhill displayed an “oh shit” countenance and then “clammed up.” Underhill testified:

[A]s a law enforcement officer for 20 years, sometimes when you are interviewing somebody about something that’s going on and they realize that they have said too much, they know they need to be quiet as soon as possible because they may be implicating themselves in something. . . .

34. Reeves’ mistake implicates causation as well as negligence. Even if Ciesla should have issued Reeves a cautionary instruction about the presence of the light poles, it would not have prevented the accident. Orloff, a credible expert, testified as follows:

Q. As far as causation is concerned, do you have an opinion as to whether the controller, if he had instructed the pilot to go to the west ramp and told him the caution of poles at the south ramp, whether that would have prevented the accident?

* * *

A. No. I mean if the pilot indeed thought he was landing at the west ramp, the caution of poles on the south ramp is pretty irrelevant. You know, if he was still keyed in and remained keyed in on the south ramp thinking it was the west ramp, he probably – it would have come out the same.

* * *

THE COURT: Just so I have that clear, so what you have said is if a person is cautioned about a danger but does not believe he's operating within the area of the danger it would make no difference because he wouldn't be conscious of the possibility of hitting the danger.

THE WITNESS: Well, that's right, if you were thoroughly convinced that you were going to a place where those poles aren't.

THE COURT: Then he's outside the danger?

THE WITNESS: Yes.

(Tr. Trans. Vol. 4, pp. 22-23).

35. Reeves had alternative routes to follow once he was instructed to proceed directly to customs. He could have flown over lighted runways and taxiways. This would have avoided the poles completely. This was his best route.

36. Alternatively, if Reeves chose to stray from the obstacle-free zone of runways and taxiways he should have been on the look-out for obstacles. Given the lighting capabilities of the helicopter he should have seen the light poles from at least 400 feet away.

37. Reeves breached the applicable standard of care by deviating from the safety of the runway and taxiway environment on a night landing on a largely unfamiliar airport by trying to land at the wrong ramp and by using an approach angle that was too shallow for a nighttime landing. Reeves' negligence was the sole cause of the crash.

38. McMahon did not prove by a preponderance of the evidence that the air traffic controllers breached a duty of care to Reeves as the pilot of the helicopter. Ciesla was not required to issue a cautionary instruction to Reeves about the poles near the south ramp

when granting the request to land on the west ramp. Up until the moment Reeves deviated from a prudent approach over runway 27L, there was nothing about the helicopter's position or altitude that would cause Ciesla any concern for the safety of the flight. When Reeves deviated from the instruction to proceed direct to the west ramp by turning toward the south ramp, Ciesla was facing in the opposite direction performing other tasks. As soon as Ciesla finished communicating with another inbound aircraft, he turned his attention back to the helicopter to check its progress. Ciesla immediately noticed a deviation from the helicopter's previous flight path and keyed his microphone to ask Reeves to state his intentions. Before he could speak, the helicopter crashed into the pole. Ciesla monitored the progress of the helicopter's flight properly. He observed the helicopter six (6) times, three (3) of which were in the last 51 seconds of its flight. 39. Reeves' position that he intended to land at the south end of the west ramp is not credible. This is so because the helicopter's wheels were too low and too early to be at the west ramp. If Reeves was trying to land on the west ramp, his approach angle was too slim; it was 0.74 degrees. A shallow approach angle is 5 degrees, while a normal angle is 8 to 12 degrees, and a steep angle is 15 degrees. The Rotor Angle Flying Handbook (DX 81), a collection of best practices, advises that pilots make a steep approach at night to avoid striking obstacles. This Reeves did not do.

IV. Conclusion

The sole cause of the accident was Reeves' negligence in attempting to land at the south ramp in the mistaken belief that it was the west ramp. Reeves could have landed safely on the south ramp even if that was his objective, if he followed the runway and taxiway that leads to the south ramp. Instead, Reeves made a decision to fly over the

infield at Willow Run in a direction that was contrary to the instructions he had been given, and at a moment in time that he was not under observation from the tower. The flight path was wholly unexpected by Ciesla. He had no reason to anticipate it. He was not negligent in failing to observe it.

Judgment will be entered for the United States of America.

s/Avern Cohn
AVERN COHN
UNITED STATES DISTRICT JUDGE

Dated: May 29, 2007

I hereby certify that a copy of the foregoing document was mailed to the parties of record on this date, May 29, 2007, by electronic and/or ordinary mail.

s/Julie Owens
Case Manager, (313) 234-5160